**MOAG Postdoctoral Fellowships for Ph.D. Recipients from Institutes in China**

**Open Call & Guidelines – 2019**

**Dead line for submission: April 30, 2019**

The Agriculture Research Organization invites applications for Postdoctoral Fellowships. The Fellowships are intended for Chinese citizens that have completed a Ph.D. program, **in the past 5 years**, **Applications of candidates who received their Ph.D. certificate prior to 1.1.2014 will not be considered**. The fellowship program is designed to identify and support young scientists aspiring to become future leaders in the field of Agricultural Sciences in Universities of their home country. The main objectives of the fellowships is to avail excellent and promising scientists with the opportunity to become proficient in advanced technologies present in the Agriculture Research Organization and to establish future collaborations with Israeli scientists.

The fellowships will be awarded for **one year**. Fellows may initiate their post-doctoral training as of **the beginning of 2019**. The total award is **100,000 Israeli Shekels** (equivalent to app. $28,000 depending on the exchange rate) **per year.**

Applicants will have to select a mentor and contact him personally to discuss the possibility to join his research group on a specific project. If the outcome is positive, the applicant should ask the mentor to provide him with a letter of agreement regarding his willingness to host him in his lab and to contribute to the fellowship. The mentor’s letter of agreement should be attached to the submission (PDF file).

Applicants should also describe succinctly their specific contribution to the project they are joining during the stay in the mentor’s lab.

***Please note that:***

***You can apply only once and only with one mentor.***

***Mentors can support only one application and can deliver only one letter of agreement.***

***Multiple applications will not be considered.***

***Applications without the mentor agreement letter will not be accepted.***

The mentor’s agreement to host the applicant does not mean that the applicant have been accepted to the program. All the valid submissions will be evaluated by a committee that will consider the scientific merit of each submission file. Final decisions will be issued to the best candidates depending on the number of available fellowships.

Potential mentors and related projects are listed in the Appendix.

Applicants will be evaluated on the basis of academic excellence that is reflected in productivity and impact in the field of study (e.g., scientific publications, presentations at scientific conferences, international scientific activity, antecedent training periods in other universities and research centers in China or abroad, participation in scientific societies, awards, and teaching achievements). Special emphasis will be placed on the applicant's scientific training and achievements.

Applicants will submit their applications IN ENGLISH on the attached **application forms** and according to the format in the application form, to the Secretary office of the Associate Director for Academic Affairs, Mrs. Liraz Bergman: liraz@volcani.agri.gov.il including the details below:

1. Curriculum vitae according to the following sections:

* Personal
* University Education and Additional Training.

**IMPORTANT NOTE: Applicants are requested to indicate clearly the exact date of their Ph.D/D.Sc. graduation and attach a certificate of their diploma. If such a diploma has not been awarded yet applicants are requested to provide a letter of eligibility for a Ph.D/D.Sc. degree. In the latter case the applicant will have to provide the official diploma prior to his/her arrival to Israel).**

* Positions Held in National and International Academic Institutions and Status. Please add teaching Experience (if applicable). Please note that the program addresses only applicants with a postdoc status. Applicants holding already a position of researcher in a university or a research center are not eligible.
* Active Participation in Meetings (**please indicate clearly presentation of a poster, lecture or invited speaker)**
* Awards, scholarships, Fellowships, Research Grants
* For research grants indicate clearly
	+ International Competitive Grants
	+ National Competitive Grants
	+ Other Funds

2. A short description (up to 200 words) of the applicant’s present research activities and scientific achievements to date and the professional and scientific goals following acceptance of the requested fellowship.

3. List of publications divided into the following sections:

* Articles in Reviewed Journals (applicants may upload 3 of their best publications in PDF format). Please indicate the IF (impact factor) of the journal.
* Books and Invited Reviews
* Articles in Non-Reviewed Journals in English
* Articles in Symposia Proceedings

**List of publications that will not be divided into the following categories will not be considered**.

4. Mentor’s letter of agreement

5. Official graduate program transcripts of courses and grades completed during Master and Doctoral studies.

6. Application for a fellowship requires proficiency in English. All applicants must satisfy this requirement and provide Testimonial to English proficiency in one of the ways listed below:

A. Satisfy score requirement in one of the following tests**:**

* TOFEL (*Test of English as a Foreign Language Minimum Score*:550 (or 213 in the computer version)**;**
* IELTS (*International**English Language Testing System Minimum Score:* 6.5)**;**
* MELAB *(Michigan English Language Assessment Battery Minimum Score:* 80**)**

B. Provide proof of completion of a previous degree program in an English language university.

C. Provide proof of prolonged residence and exercise of a profession in an English speaking country

D. Provide proof of completion of the Advanced English Training by China’s Ministry of Education.

7. Recommendation letters from the doctoral thesis primary advisor and two other individuals.

**Please follow all instructions carefully. Applications which will not include all material in the requested form will not be evaluated.**

In the event that the fellowship will be awarded, the applicant will have to issue a student VISA and supply testimonial of personal injury insurance to cover the entire training period in Israel. Upon arrival at the ARO, the post-doctoral fellow will be required to sign a Fellowship Statement with the ARO detailing the responsibilities and obligations of each party towards the other. (Fellowship Statement available on :<http://www.agri.gov.il/download/files/FellowshipStatement.pdf>

***Appendix:***

***List of potential mentors and related research projects:***

**ELTZOV EVGENI**

 eltzov@volcani.agri.gov.il

**Development biosensor for real-time and continuous monitoring of decay development in stored crops**

The main purpose of this study is development biosensor for real-time determination VOCs changes in the air due to infection and development of rots processes in harvested agricultural crops. Bioreporters coupled with the sensor will transmit and translate crops state to a smartphone application for the end-user ease of usage. This will allow the creation of the proprietary field-operable device and will provide tools for more efficient post-harvest crops management.

Education requirements

Ph.D. in biotechnology, chemical or live sciences

Scientific experience

Excellent knowledge of microbiology, optical techniques and microscopy, surface modifications, biosensor applications

Skills

Ability to work independently as well as in a team environment

**SHTENBERG GIORGI**

 giorgi@volcani.agri.gov.il

**Development of miniaturized optical sensing platform for identification and characterization of botulinum toxin**

The main hypothesis of the study is that a single miniaturized biosensing platform can perform several sequential operations: analyte immobilization, molecular separation, specific detection of the target analyte and monitoring its catalytic activity by optical transduction (by evaluating the characteristic reflectivity spectrum obtained from the predefined porous material), thus allowing for precise, rapid, high-throughput and label-free analysis of real livestock/field samples. As a proof-of-concept, a self-reporting lab-on-chip will be designed to identify specific BoNT and evaluate their biological activity for source and risk assessment. Our hypothesis relies on our laboratory’s extensive experience 4, 5, 8-13 and on Sailor’s et al. research studies 14-17 with nanostructured PSi biosensors, demonstrating highly-efficient optical detection of various target molecules (e.g., bacteria, proteins, enzymes, nucleic acids and peptides) and direct and real-time measurement of proteolytic

Education requirements

Ph.D. in Life sciences, Chemistry, Biotechnology, Nanotechnology, Biochemistry

Scientific experience

Extensive experience in fields of research of semiconductors, optical sensors (biosensors), nanomaterials, microfluidics systems, surface chemistry, polymer science, biological interfaces and protein engineering.

Skills

Professional and skilled in data analysis and troubleshooting

**BIRAN JAKOB**

 Jakob@agri.gov.il

**Generating Nile tilapia with heightened appetite using genome editing technology**

We are currently establishing genome-editing approaches for the Nile tilapia (Oreochromis niloticus), one of the world’s most important food fishes. Cocaine and amphetamine regulated transcript (CART) is a neuropeptide that strongly and negatively regulate appetite in fish, and the tilapia genome contains six potential CART genes. The current project aims to: 1. Identify the appetite regulating CART genes in the tilapia genome. 2. Induce loss-of-function mutations in the tilapia CART genes to generate tilapia with increased-appetite. The study will involve molecular work as well as in-vivo experiments in Nile tilapia.

Education requirements

PhD in animal science/neuroendocrinology/aquaculture/similar

Scientific experience

in-vivo assays in animals and molecular biology

Skills

Basic bioinformatics tools (blast etc.). Basic molecular biology skills (PCR, cloning).

**DVIR HAY**

 haydvir@volcani.agri.gov.il

**Fatty liver in sheep as a model system for liver disease in human**

Non-alcoholic fatty liver disease (NAFLD) is a growing worldwide epidemic. The rise in its prevalence paralleled that of obesity, metabolic syndrome and insulin resistance, all of which are tightly associated with overnutrition and sedentary lifestyle. Various NAFLD mice models serve as powerful research tools, yet treatment results obtained in rodents were of limited success in human. To develop a model of potentially improved translational probability, as large animals often offer, we have established a nutritional model for hepatic steatosis in sheep.

The project aims at studying the role of dietary factors in modulation of hepatic steatosis, and at testing their benefits as therapeutic agents.

Required Skills:

Strong record in Molecular or Cellular Biology. Experience in gene expression analysis, histopathology or Proteomics.

**JAMI ELIE**

 elie@volcani.agri.gov.il

**Exploring the prokaryotic community associated with the rumen ciliate protozoa population**

Ciliate protozoa are an integral part of the rumen microbiome and were found to exert a large effect on the rumen ecosystem itself as well as their host animal physiology. Part of these effects have been attributed to their ability to harbor a diverse ecto- and endo-symbiotic community of prokaryotic cells. Studies on the relationship between the protozoa population and their associated prokaryotic community in the rumen mainly focused on the methanogens, revealing that protozoa play a major role in enhancing methanogenesis potential, emphasizing the importance of studying the protozoal community and their relationship with their associated prokaryotic components. In our lab, we aim to elucidate these cross domain interaction and explore their effect on the host animal.

Scientific experience

Experienced in lab work, particularly Molecular biology and Microbiology

Skills

Bioinformatics skills is an advantage

**SADEH ASAF**

 asafsa@volcani.agri.gov.il

**Ecological metabolomics and secondary metabolite induction in vegetable crops**

The Agroecology lab, is collaborating with the Novel Plant Metabolites Research Lab to study environmental induction of secondary metabolites in vegetable crops, with emphasis on (but not limited to) potential plant-protection and ecological implications. The project will involve a combination of wide-scope metabolic profiling and analysis, identification of biochemical induction mechanisms and localization, and determination of function and potential agricultural and ecological implications.

Education requirements

Phd in Plant Sciences / Analytical Chemistry / Plant Metabolomics / Chemical Ecology

Scientific experience

Liquid and Gas Chromatography and Mass Spectrometry, Plant Molecular Biology and Physiology, Plant-Pest Interactions, Chemical Ecology, A good publication record

Skills

Fluent English (spoken, reading, scientific writing)

**ROZENSTEIN OFFER**

 offerr@volcani.agri.gov.il

**Empowering Big Data-Driven Agriculture**

Project description: The successful candidate will join a multidisciplinary team including experts in big-data, remote sensing, and micrometeorology. The project, funded by the Israeli Ministry of Science, Technology and Space for three years, will upscale crop water consumption estimation models based on earth observation data to a global scale in order to provide timely and consistent feedback to farmers from small to large scales. Specific objectives are: (1) To develop models of crop water consumption based on combining field measurements of actual evapotranspiration, available meteorological data, and public domain satellite imagery; (2) To create a cloud based spatio-temporal model based on updated crop water consumption maps to adapt irrigation recommendations for different areas of the world.

The candidate will be involved in data acquisition and analysis, database management, model verification, evapotranspiration modeling and forecasting using reanalysis data, and preparation of annual reports, scientific papers, and communications.

Qualifications: Ph.D. / M.Sc. relevant to modelling in engineering, agricultural and/or physical sciences; Good knowledge of statistics, model performance evaluation, optimization techniques and database management; Abilities to use and write scripts in Matlab or another scientific programing language; Basic knowledge in climatology, micrometeorology, agronomy and use of earth observation data.

The candidate is expected to have a strong publication record.

Application: Please submit your resume, cover letter (two page maximum, 12 size font, single space; describing your qualifications, research interests, career goals, and vision for graduate / postdoctoral training) and the name, institution and email address of two referees either by mail or email to:

Offer Rozenstein, PhD

Department of Environmental Physics and Irrigation

Institute of Soil, Water and Environmental Sciences

Agricultural Research Organization, Volcani Center, Israel

offerr@volcani.agri.gov.il